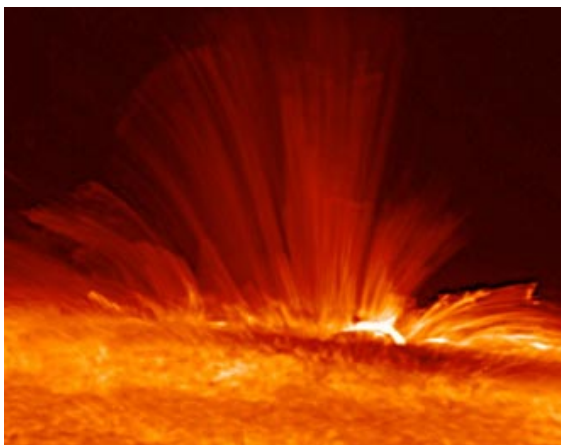


NASA Weekly Update

Week of March 19 - 26, 2007

March 21: International Spacecraft Reveals Detailed Processes on the Sun: NASA released on Wednesday never-before-seen images that show the



Taken Nov. 20, 2006, this image reveals the structure of the solar magnetic field rising vertically from a sunspot.

sun's magnetic field is much more turbulent and dynamic than previously known. The international spacecraft Hinode, formerly known as Solar B, took the images. The Marshall Space Flight Center manages the development of the scientific instrumentation provided for the mission by NASA, industry and other federal agencies. For more information about Hinode, visit: <http://www.nasa.gov/hinode>.

March 21: NASA Managers Assess Shuttle Repair Work: During a media teleconference, NASA officials discussed the status of repair work to Space Shuttle Atlantis' external fuel tank, which was damaged during a Feb. 26 hail storm at NASA's Kennedy Space Center, Fla. Managers decided that more testing and analysis are needed to determine whether the tank will be used for the upcoming STS-117 flight or whether the tank will be replaced. On April 10, the teams expect to have the necessary data to make that decision and to establish a potential target launch date. For more

information about the STS-117 mission, visit: <http://www.nasa.gov/shuttle>.

March 19: NASA Glenn to Test Orion Crew Exploration Vehicle: NASA's Glenn Research Center will conduct integrated environmental testing of the Orion crew exploration vehicle in the Space Power Facility at the center's Plum Brook Station in Sandusky, Ohio. The environmental tests are designed to demonstrate the ability of Orion hardware to meet specified performance requirements in simulated environmental conditions such as those experienced during launch, in-orbit operations and re-entry. For more information about Orion, visit: <http://www.nasa.gov/orion>.

March 22: NASA Helps Local Student Rocket Scientists Reach for the Stars: Some of the best student scientists from across the country are hard at work on their model rockets, set to launch this spring as part of NASA's Student Launch Initiative. Student teams will display and launch their vehicles at a rocket launch event April 25-28 hosted by NASA's Marshall Space Flight Center in Huntsville, Ala. The Student Launch Initiative is not a competition. NASA will recognize teams with plaques for excellence. For more information, visit Marshall's academic affairs Web site at: <http://www.nasa.gov/centers/marshall/education/index.html>. For more information on the Student Launch Initiative, visit: <http://education.msfc.nasa.gov/docs/127.htm>.

March 22: NASA Assigns Crew for Shuttle Mission to Install Japanese Lab: NASA has assigned the crew for space shuttle mission STS-124, targeted for launch in February 2008. Navy Cmdr. Mark E. Kelly will command the space shuttle Atlantis during the mission. Navy Cmdr. Kenneth T. Ham will serve as the pilot. Mission specialists will include NASA astronauts Karen L. Nyberg; Air Force Col. Ronald J. Garan, Jr.; Air Force Reserve Col. Michael E. Fossum; and Navy Cmdr. Stephen G. Bowen. Japan Aerospace Exploration Agency (JAXA) astronaut Akihiko Hoshide

also will serve as a mission specialist. For complete astronaut biographical information, visit:

<http://www.jsc.nasa.gov/Bios>. For more information about NASA's Space Shuttle Program, visit: <http://www.nasa.gov/shuttle>.

March 23: NASA Set to Welcome Japanese Space Station Component: NASA will hold a ceremony April 17 at 9 a.m. EDT to officially welcome a new International Space Station component to the Kennedy Space Center. The Experiment Logistics Module Pressurized Section for the Japanese Experiment Module arrived at Kennedy March 12 to begin preparations for its future launch. The Japanese Experiment Module will be carried into space on three shuttle missions, which is known as Kibo. For more information on Kibo and the International Space Station, visit: <http://www.nasa.gov/station>.

March 21: NASA Awards Contracts for Spacecraft Systems and Services: NASA has selected Space Systems Loral, Palo Alto, Calif., and MicroSat Systems, Inc., Littleton, Colo., for award of the Rapid Spacecraft Development Office, Rapid II, contracts with a minimum value of \$50,000 each. This award is under a commercial, fixed price, indefinite delivery/indefinite quantity contract. Each of the Rapid II contracts has a potential maximum value of \$1.5 billion.

March 21: NASA Marshall Space Flight Center Awards Human Capital Contract: NASA's Marshall Space Flight Center has awarded Will Technology, Inc., Huntsville, Ala., a contract to provide administrative and technical support services at the center. The contract begins April 1, 2007, with a one-year base period followed by four one-year options that may be exercised at NASA's discretion.

Weekly Status Reports



The Expedition 14 crew continued work this week on scientific experiments and increased the bandwidth on the International Space Station's computer network. Commander Michael Lopez-Alegria and Flight Engineer Sunita Williams spent time working with experiments that may hold the key to several aspects of long-duration space flight as NASA looks forward to

missions back to the moon and on to Mars or other destinations.

Each served as test subject and operator for the Anomalous Long Term Effects in Astronauts' Central Nervous System experiment that examines how cosmic radiation affects brain waves. As test subjects, they wore an electroencephalograph cap that records readings of their brain functions, and over that, a special helmet with Italian-designed instruments that records the amount and types of cosmic rays passing through the station. Since cosmic radiation is even more prevalent at greater distances from Earth, the research could lead to countermeasures important to the safety and productivity of future explorers.

Lopez-Alegria and Williams also worked with the Nutritional Status Assessment experiment tracking how their bodies process nutrients in space and how food supplies are affected by storage in that environment. Additionally, Lopez-Alegria provided the final samples associated with the Renal Stone Risk during Spaceflight: Assessment and Countermeasure Validation investigation, which is looking at the space effectiveness of a drug used on Earth to prevent kidney stones.

Flight Engineer Mikhail Tyurin worked with three Russian experiments that monitor cosmic rays and background radiation as they relate to long-duration flights and documented the condition of the Earth below from the unique vantage point of the station. The crew worked on an upgrade to the laptop computer network. For more about the crew's activities and station sighting opportunities, visit: <http://www.nasa.gov/station>.



- **April 7:** Launch of the Expedition 15 crew. The crew includes Commander Fyodor Yurchikhin and Flight Engineer Oleg Kotov. Sunita Williams will finish her remaining time of her six-month tour of duty on the station as a member of Expedition 15 crew.
- **April 18:** Landing of the Expedition 14 crew at Kazakhstan's Baikonur Cosmodrome. The crew includes Commander Michael Lopez-Alegria, Flight Engineer Mikhail Tyurin, and Flight Engineer Sunita Williams.
- **Targeted for Late April:** Launch of Space Shuttle Atlantis from Kennedy Space Center for mission STS-117 to the International Space Station.

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